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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,858	10/19/2001	Frederic Lagarrigue	GB 000146	4952

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EXAMINER

RAMAKRISHNAIAH, MELUR

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 11/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/082,858	LAGARRIGUE, FREDERIC	
	Examiner	Art Unit	
	Melur Ramakrishnaiah	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6-17-02</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. The indicated allowability of claims 5-7 and 10 is withdrawn in view of the newly discovered reference(s) to Rahmatullah et al. (US PAT: 6,026,130, hereinafter Rahmatullah); Estrick et al. (US PAT: 5,237,332, hereinafter Estrick) and Young et al. (JP10-117380, hereinafter Young). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ray (US PAT: 5,287,286) in view of Rahmatullah et al. (US PAT: 6,026,130, hereinafter Rahmatullah).

Regarding claim 1, Ray discloses a method of receiving a signal propagated over a signal channel comprising a receiving and demodulating the signal, equalizing the demodulated signal in a first operation to counter a first type of distortion and in a second operation equalizing the signal from the first operation to counter a second type of distortion (col. 1, line 41 – col. 2, line 23).

Ray differs from claim 1 in that he does not teach the following: storing the training sequences for respective couples of transmitters and receivers equipment and

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by selecting the optimum training sequence for currently used couple of transmitting and receiving equipments.

However, Rahmatullah teaches the following: storing the training sequences for respective couples of transmitters and receivers equipment and by selecting the optimum training sequence for currently used couple of transmitting and receiving equipments (col. 14, line 38 – col. 16, line 58).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ray's system to provide for the following: storing the training sequences for respective couples of transmitters and receivers equipment and by selecting the optimum training sequence for currently used couple of transmitting and receiving equipments as this arrangement would facilitate equalization of nonlinearities in the signal by using proper training sequence stored as taught by Rahmatullah.

Regarding claims 2-4, Ray further teaches the following: equalization in the first operation is to counter distortion introduced by the signal channel, the equalization in the first operation is to counter inter symbol inference, equalization in the second operation is to counter distortions introduced by transmitting and receiving elements (col. 2, line 57 – col. 3, line 60).

4. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ray in view of Rahmatullah as applied to claim 4 above, and further in view of and Estrick et al. (US PAT: 5,237,332, hereinafter Estrick).

The combination differs from claims 5-6 in that although it teaches use of training sequences to counter distortions in the received signal as seen above, it does not teach the following: countering the non-linear characteristics present in the transmitting and receiving circuits.

However, Estrick discloses receiver distortion correction circuit and method which teaches the following: countering the non-linear characteristics present in the receiving circuits (col. 5 lines 22-61).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for the following: countering the non-linear characteristics present in the transmitting and receiving circuits as this arrangement would facilitate to combat problems associated with distortion of signals due to non-linear circuits as taught by Estrick, thus obtaining better performance.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karabinis (US PAT: 4,415,872) in view of Serizawa et al. (US PAT: 5,274,670, hereinafter Serizawa) and Young et al. (JP10-117380, hereinafter Young).

Regarding claim 8, Karabinis discloses a receiver comprising means for receiving a signal propagated over a signal channel, means for demodulating the received signal (implicit), a first equalizing stage (for example 1-1, fig. 2) coupled to the demodulating means for countering a first type of distortion and a second equalizing stage (for example 1-2, fig. 1) coupled to the first equalizing stage for countering a second distortion (figs. 1-2, col. 2, line 34 – col. 6, line 20).

Karabinis differs from claim 8 in that he does not teach the following: first equalizing stage includes means for storing a first training sequence and the second equalizing stage include means for storing a second training sequence for respective couples comprising a receiver with different transmitters and means for selecting optimum training sequence to a currently used couple.

However, Serizawa teaches the following: first equalizing stage includes means for storing a first training sequence and the second equalizing stage include means for storing a second training sequence for respective couples comprising a receiver with transmitter and means for selecting optimum training sequence to a currently used couple (col. 8, line 21 – col. 9, line 18); and Young teaches the following: couples comprising the receiver with different transmitters (Drawing 1, paragraphs: 0011-0014).


Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Karabinis' system to provide for the following: first equalizing stage includes means for storing a first training sequence and the second equalizing stage include means for storing a second training sequence for respective couples comprising a receiver with transmitter and means for selecting optimum training sequence to a currently used couple as this arrangement would enable using stored training sequence for equalizing signals received; and Young teaches the following: couples comprising the receiver with different transmitters as this arrangement would facilitate multiple parties to communicate with common cordless base station as taught by young.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melur Ramakrishnaiah whose telephone number is (571)272-8098. The examiner can normally be reached on 9 Hr schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curt Kuntz can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Melur Ramakrishnaiah
Primary Examiner
Art Unit 2643